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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,491	06/29/2001	Masayasu Wakabayashi	P21139	6313

7055 7590 09/06/2005

GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

CRAIG, DWIN M

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,491

Applicant(s)

WAKABAYASHI ET AL.

Examiner

Dwin M Craig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 1, 5, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. **Claims 1-14** have been presented for reconsideration based on Applicants' arguments and amended claim language.

Response to Arguments

2. Applicants' arguments presented in the 5/25/2005 responses have been fully considered. The Examiner's response is as follows,

2.1 Regarding the Applicants' response to the Examiner's objection to the abstract. The Examiner thanks the Applicants' for amending the abstract and the Examiner withdraws the earlier objection to the specification.

2.2 Regarding the Applicants' response to the 35 USC § 101 rejections of claims 1-14 for being directed towards non-statutory subject matter, the Examiner has found Applicants' arguments to be unpersuasive. The Examiner will present a new form of this rejection to further clarify the manner in which the claim language needs to be changed in order for the claims to be directed towards statutory subject matter.

2.3 Regarding the Applicants' response to the 35 USC 102(a) rejections of claims 1-14, applicant argued, *see page 15 of the 5/25/05 response*,

"Applicants submit that the rejection is inappropriate at least since FUJII does not properly qualify as a reference under 35 USC § 102(a)."

The Examiner agrees with Applicant and withdraws the earlier 35 USC 102(a) rejections of the claims.

Applicant further argued, *see page 15 of the 5/25/2005 response*,

"FUJII does not disclose creating an interference polygon with respect to each voxel that interferes with the shape data as recited."

The Examiner has found this argument to be persuasive and withdraws the earlier 35 USC 102 rejections of the claims.

2.4 The Examiner notes the following; the *Fujii* reference neither anticipates nor makes obvious the following limitations, *"the read out shape data are embraced by a set of voxels that are rectangular parallelepipeds"* as expressly disclosed in independent claims 1 and 5.

Claim Objections

3. Claims 1, 5, 13 and 14 are objected to because of the following informalities: The word *"parallelepiped(s)"* is/are misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-14 are newly rejected under 35 USC 101 because they are disembodied and merely algorithmic in their nature where these method claims could be implemented through mental steps and/or constructed on paper with pencil, and are not limited to being performed by a computer or a machine. See *In re Meyer and Weissman*, 215 USPQ193 (CCPA 1982), *In re Walter*, 205 USPQ 397 (CCPA 1980), *Arshal v United States* 208 USPQ 397 (US Cl Ct 1980), *In re Sarkar* 200, USPQ 132 (CCPA 1978), *In re Musgrave*, 431 F. 2nd at 893 167 USPQ 280

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(CCPA 1970) and *In re Foster*, 438 F. 2d 1011, 1013, 169 USPQ 99, 101 (CCPA 1971). (*see MPEP 2106*).

4.1 In the interest of compact prosecution the Examiner will now provide, *specific* claim language changes that could be made so that Applicants' claim language is directed towards statutory subject matter.

4.2 However, this rejection could be overcome by amending the method claims to include language like: "A computer implemented method", as long as the computer implementation is supported by the specification. As regards the apparatus claims, the following language would overcome the rejections, "A computing apparatus." Amendment is required. It is noted by the Examiner that Applicants' have support for a computer on page 13 of the specification.

4.3 Claim 13 recites a computer program product. It should be noted that code (i.e., a computer software program) does not do anything per se. Instead, it is the code stored on a computer that, *when executed*, instructs the computer to perform various functions. The following claim is a generic example of a proper computer program product claim;

A computer program product embodied on a computer-readable medium and comprising code that, when executed, causes a computer to perform the following:

Function A
Function B
Function C, etc...

Allowable Subject Matter

5. Claims 1-14 are allowed. However, it is noted that the claims are still rejected under 35 USC § 101, see section 3 of this Office Action.

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5.1 As regards independent claims 1 and 5 the following limitations, in combination with other limitations are neither anticipated nor made obvious by the prior art, *“the read out shape data are embraced by a set of voxels that are rectangular parallelopipeds”*. It is further noted that Applicant argued this limitation on page 15 *“FUJII does not disclose creating an interference polygon with respect to each voxel that interferes with the shape data as recited.”* The Examiner notes that the *“shape data”* is defined in Applicants’ specification in Figure 1 and page 3 of the specification where there is disclosed, *“a shape data readout step of reading out shape data defining a surface shape of an analysis target”*. So, the shape data is defined to be data that defines a surface shape, as further disclosed on page 13 of the specification, *“analysis model data are created from shape data such as CAD or STL data using an arithmetic device such as a computer. The analysis model data are a set of the elements of a shape that can be handled by an analysis solver (software for executing structural analysis or the like), and represent the shape of the shape data.”* So, the Applicants’ defines shape data to be, data from CAD or STL and data that defines a surface of an analysis target. This specific definition is neither disclosed nor made obvious by the prior art.

5.2 As regards independent claim 13 the following limitations, in combination with other limitations are neither anticipated nor made obvious by the prior art of record, *“a shape data readout instruction to read out shape data defining a surface shape of an analysis target”* in combination with *“a divided polygon creating instruction to move a vertex of the interference polygon which is not located in any side of said voxel, to an on-side intersection that is an intersection between said interference surface and a side of said voxel, and creating a divided*

polygon having, as vertexes the on-side intersection and vertexes of the voxel inside said shape data;”.

5.3 As regards independent claim 14 the following limitations, in combination with other limitations are neither anticipated nor made obvious, by the prior art, *“a shape data readout device that reads out shape data defining a surface shape of an analysis target”* in combination with *“a divided polygon creator that moves one of the vertexes of said interference polygon which has a predetermined property, to another vertex, and creates a divided polygon having as vertexes the on-side intersection and vertexes of the voxel inside said shape data”*.

5.4 Dependent claims 2-4 and 6-12 are allowed as they depend from allowed base claims, however, it is noted by the Examiner that these claims are still being rejected under 35 USC § 101.

Conclusion

6. **Claims 1-14** have been presented for reconsideration. **Claims 1-14** have been examined and rejected under 35 USC § 101.

6.1 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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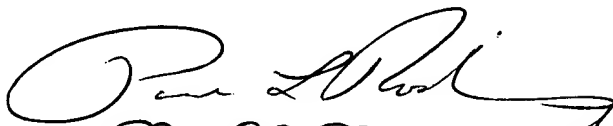
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6.2 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC


Paul L. Rodriguez 8/31/05
Primary Examiner
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